

IN THE CLAIMS:

This listing of the claims replaces all prior versions and listings of the claims in this application.

The text of all pending claims (including any withdrawn claims) is set forth below. Canceled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (Original), (Currently amended), (Canceled), (Withdrawn), (Previously presented), (New), and (Not entered).

No claims have been amended.

1. (Previously presented) A heating crucible for an organic thin film forming apparatus, the heating crucible comprising:

a main body in which to contain an organic substance;

a cover provided on the main body, the cover formed of an insulating material and having a nozzle through which a gaseous organic substance comes out from the main body;

a cover heater formed as a thin film type on the top surface of the cover;

a heat-resistant layer formed on a surface of the cover heater;

a reflective layer between the cover heater and the heat-resistant layer; and

a body heater heating the main body.

2. (Previously presented) The heating crucible of claim 1, wherein the entire cover heater is constituted by a single wire pattern formed over the entire top surface of the cover, the single wire pattern of the entire cover heater having a positive terminal at a first end of the single wire pattern and a negative terminal at a second end of the single wire pattern.

3. (Previously presented) The heating crucible of claim 2, wherein the single wire pattern of the cover heater is constituted by printed platinum on the cover.

4. (Original) The heating crucible of claim 1, wherein the cover further comprises at least one embedded thermocouple.

5.-6. (Canceled)

7. (Original) The heating crucible of claim 1, wherein the insulating material forming the cover has a good heat radiation property.

8. (Original) The heating crucible of claim 7, wherein the cover is formed of alumina.

9. (Original) The heating crucible of claim 1, wherein the cover heater is formed in a concentric pattern around the nozzle.

10. (Previously presented) The heating crucible of claim 1, wherein the cover heater is constituted by a sintered printed conductive paste on the cover; and
wherein the conductive paste comprises metal particles and metal oxide.

11. (Previously presented) The heating crucible of claim 1, wherein the cover heater is constituted by a thin chemical vapor deposition graphite layer on the cover.

12. (Previously presented) The heating crucible of claim 1, wherein the insulating material forming the cover comprises a thermally conductive ceramic material.

13. (Previously presented) The heating crucible of claim 12, wherein the thermally conductive ceramic material comprises a ceramic nitride or a ceramic carbide.

14. (Original) The heating crucible of claim 13, wherein the ceramic nitride is aluminum nitride.

15. (Original) The heating crucible of claim 13, wherein the ceramic carbide is silicon carbide.

16. (Previously presented) The heating crucible of claim 1, wherein the cover heater is constituted by a sprayed heating block on the cover; and

wherein the sprayed heating block is constituted by a sprayed heat emitting material on the cover.

17. (Previously presented) The heating crucible of claim 1, wherein the main body is formed of the same insulating material forming the cover; and
wherein the body heater is formed as a thin film type on the outer wall of the main body.

18. (Previously presented) The heating crucible of claim 17, wherein the entire body heater is constituted by a single wire pattern formed over at least the entire outer side wall of the main body, the single wire pattern of the entire body heater having a positive terminal at a first end of the single wire pattern and a negative terminal at a second end of the single wire pattern.

19. (Previously presented) The heating crucible of claim 18, wherein the single wire pattern of the body heater is constituted by printed platinum on the body.

20. (Previously presented) The heating crucible of claim 18, wherein the single wire pattern of the body heater is further formed on the entire outer bottom wall of the main body.

21. (Original) The heating crucible of claim 17, wherein the insulating material forming the main body is a ceramic material.

22. (Original) The heating crucible of claim 17, wherein the main body further comprises at least one embedded thermocouple.

23. (Original) The heating crucible of claim 17, further comprising a heat-resistant layer on the surface of the body heater.

24. (Original) The heating crucible of claim 23, further comprising a reflective layer between the body heater and the heat-resistant layer.

25. (Original) The heating crucible of claim 17, wherein the insulating material forming the main body has a good heat radiation property.

26. (Original) The heating crucible of claim 25, wherein the main body is formed of alumina.

27. (Previously presented) The heating crucible of claim 1, wherein the nozzle is a convergent-divergent nozzle through which the gaseous organic substance comes out from the main body in a diverging pattern, thereby enabling the heating crucible to produce a diverging pattern of the gaseous organic substance.

28. (Previously presented) The heating crucible of claim 1, wherein the nozzle extends from a surface of the cover facing toward the main body to a surface of the heat-resistant layer facing away from the main body;

wherein an entry opening of the nozzle through which the gaseous organic substance enters the nozzle is flush with the surface of the cover facing toward the main body;

wherein an exit opening of the nozzle through which the gaseous organic substance exits from the nozzle is flush with the surface of the heat-resistant layer facing away from the main body; and

wherein the nozzle converges from the entry opening to a throat of the nozzle at a junction between the cover and the heat-resistant layer, and diverges from the throat of the nozzle to the exit opening.

29. (Previously presented) The heating crucible of claim 1, wherein the cover heater is a single-layer cover heater; and

wherein the body heater is a single-layer body heater.

30. (New) The heating crucible of claim 29, wherein the single-layer cover heater is the only cover heater on the cover; and

wherein the single-layer body heater is the only body heater on the main body.

31. (New) The heating crucible of claim 1, wherein the heat-resistant layer blocks heat generated by the cover heater from being transferred outside the heating crucible.